

c24
84. (New) An isolated antibody or fragment thereof which specifically binds a polypeptide consisting of amino acids 24 to 238 of SEQ ID NO:2.

2
85. (New) The antibody or fragment thereof of claim 84, wherein said polypeptide is glycosylated.

3
86. (New) The antibody or fragment thereof of claim 84, which is polyclonal.

4
87. (New) The antibody or fragment thereof of claim 84 which is selected from the group consisting of

- a) a chimeric antibody;
- b) a Fab fragment; and
- c) a F(ab')₂ fragment.

5
88. (New) The antibody or fragment thereof of claim 84, which is labeled.

6
89. (New) The antibody or fragment thereof of claim 88, wherein the label is selected from the group consisting of:

- a) an enzyme;
- b) a fluorescent label; and
- c) a radioisotope.

7
90. (New) The antibody or fragment thereof of claim 84, which specifically

binds to said polypeptide in a Western blot.

8
91. (New) The antibody or fragment thereof of claim 84, which specifically binds to said polypeptide in an ELISA.

9
92. (New) The antibody or fragment thereof of claim 84, which specifically binds to said polypeptide in a competitive-binding assay.

10
93. (New) The antibody or fragment thereof of claim 84, which specifically binds to said polypeptide in a radioimmunoassay.

11
94. (New) An isolated cell that produces the antibody or fragment thereof of claim 84.

12
95. (New) A hybridoma that produces the antibody or fragment thereof of claim 84.

Sub E'
96. (New) A method of detecting a DR4 protein in a biological sample comprising:
a) contacting the biological sample with the antibody or fragment thereof of claim 84; and
b) detecting the DR4 protein in the biological sample.

14
97. (New) A composition comprising the antibody or fragment thereof of claim
84, and a carrier.

98. (New) The antibody or fragment thereof of claim 84, which is an antagonist
of the polypeptide of SEQ ID NO:2.

99. (New) The antibody or fragment thereof of claim 84, which is an agonist of
the polypeptide of SEQ ID NO:2.

15
100. (New) A method of producing the antibody or fragment thereof of claim 84
comprising:

- a) introducing an immunogenic epitope of a polypeptide consisting of amino acids 1-468 of SEQ ID NO:2 into an animal; and
- b) recovering said antibody or fragment thereof.

20
101. (New) An isolated monoclonal antibody or fragment thereof which
specifically binds a polypeptide consisting of amino acids 24 to 238 of SEQ ID NO:2.

21
102. (New) The antibody or fragment thereof of claim 101, wherein said
polypeptide is glycosylated.

22
103. (New) The antibody or fragment thereof of claim 101, which is selected from
the group consisting of:

- a) a chimeric antibody;
- b) a Fab fragment; and
- c) a F(ab')₂ fragment.

23
104. (New) The antibody or fragment thereof of claim 101, which is labeled.

24
105. (New) The antibody or fragment thereof of claim 104, wherein the label is
selected from the group consisting of:

- a) an enzyme;
- b) a fluorescent label; and
- c) a radioisotope.

25
106. (New) The antibody or fragment thereof of claim 101, which specifically
binds to said protein in a Western blot.

26
107. (New) The antibody or fragment thereof of claim 101, which specifically
binds to said polypeptide in an ELISA.

27
108. (New) The antibody or fragment thereof of claim 101, which specifically
binds to said polypeptide in a competitive-binding assay.

28
109. (New) The antibody or fragment thereof of claim 101, which specifically
binds to said polypeptide in a radioimmunoassay.

29
110. (New) An isolated cell that produces the antibody or fragment thereof of
claim 101.
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30
111. (New) A hybridoma that produces the antibody or fragment thereof of claim
101.
20

Sub E2
112. (New) A method of detecting a DR4 protein in a biological sample
comprising:
a) contacting the biological sample with the antibody or fragment thereof of
claim 101; and
b) detecting the DR4 protein in the biological sample.

32
113. (New) A composition comprising the antibody or fragment thereof of claim
101, and a carrier.
20

114. (New) The antibody or fragment thereof of claim 101, which is an antagonist
of the polypeptide of SEQ ID NO:2.

115. (New) The antibody or fragment thereof of claim 101, which is an agonist
of the polypeptide of SEQ ID NO:2.

33
116. (New) A method of producing the antibody or fragment thereof of claim 101
comprising:

- a) introducing an immunogenic epitope of a polypeptide consisting of amino acids 1-468 of SEQ ID NO:2 into an animal; and
- b) recovering said antibody or fragment thereof.

Sub E5

117. (New) An isolated antibody or fragment thereof obtained from an animal that has been immunized with a polypeptide consisting of amino acids 24 to 238 of SEQ ID NO:2.

39
118. (New) The antibody or fragment thereof of claim *117*, wherein said polypeptide is glycosylated.

40
119. (New) The antibody or fragment thereof of claim *117*, which is polyclonal.

41
120. (New) The antibody or fragment thereof of claim *117*, which is monoclonal.

42
121. (New) The antibody or fragment thereof of claim *117*, which is selected from the group consisting of:

- a) a chimeric antibody;
- b) a Fab fragment; and
- c) a F(ab')₂ fragment.

43
122. (New) The antibody or fragment thereof of claim *117*, which is labeled.

- 44 123. (New) The antibody or fragment thereof of claim 122, wherein the label is selected from the group consisting of:
- an enzyme;
 - a fluorescent label; and
 - a radioisotope.

45 124. (New) The antibody or fragment thereof of claim 117, which specifically binds to said polypeptide in a Western blot.

46 125. (New) The antibody or fragment thereof of claim 117, which specifically binds to said polypeptide in an ELISA.

47 126. (New) The antibody or fragment thereof of claim 117, which specifically binds to said polypeptide in a competitive-binding assay.

48 127. (New) The antibody or fragment thereof of claim 117, which specifically binds to said polypeptide in a radioimmunoassay.

49 128. (New) An isolated cell that produces the antibody or fragment thereof of claim 117.

50 129. (New) A hybridoma that produces the antibody or fragment thereof of claim 117.

Sub E4
130. (New) A method of detecting a DR4 protein in a biological sample

comprising:

- a) contacting the biological sample with the antibody or fragment thereof of claim 117; and
- b) detecting the DR4 protein in the biological sample.

52
131. (New) A composition comprising the antibody or fragment thereof of claim

38
117, and a carrier.

132. (New) The antibody or fragment thereof of claim 117, which is an antagonist of the polypeptide of SEQ ID NO:2.

133. (New) The antibody or fragment thereof of claim 117, which is an agonist of the polypeptide of SEQ ID NO:2.

53
134. (New) A method of producing the antibody or fragment thereof of claim 117
comprising:

- a) introducing an immunogenic epitope of a polypeptide consisting of amino acids 24-238 of SEQ ID NO:2 into an animal; and
- b) recovering said antibody or fragment thereof.

58
135. (New) An isolated antibody or fragment thereof that specifically binds a polypeptide as it is naturally expressed on the surface of a cell, said polypeptide comprising

amino acids 24 to 468 of SEQ ID NO:2.

59
136. (New) The antibody or fragment thereof of claim 135, wherein said cell surface-expressed polypeptide is glycosylated.

60
137. (New) The antibody or fragment thereof of claim 135, which is polyclonal.

61
138. (New) The antibody or fragment thereof of claim 135, which is monoclonal.

62
139. (New) The antibody or fragment thereof of claim 135, which is selected from the group consisting of:

- a) a chimeric antibody;
- b) a Fab fragment; and
- c) a F(ab')₂ fragment.

63
140. (New) The antibody or fragment thereof of claim 135, which is labeled.

64
141. (New) The antibody or fragment thereof of claim 140, wherein the label is selected from the group consisting of:

- a) an enzyme;
- b) a fluorescent label; and
- c) a radioisotope.

~~142.~~ (New) The antibody or fragment thereof of claim ~~135~~⁵⁸, which specifically binds to said polypeptide in a Western blot.

~~143.~~ (New) The antibody or fragment thereof of claim ~~135~~⁵⁸, which specifically binds to said polypeptide in an ELISA.

~~144.~~ (New) The antibody or fragment thereof of claim ~~135~~⁵⁸, which specifically binds to said polypeptide in a competitive-binding assay.

~~145.~~ (New) The antibody or fragment thereof of claim ~~135~~⁵⁸, which specifically binds to said polypeptide in a radioimmunoassay.

~~146.~~ (New) An isolated cell that produces the antibody or fragment thereof of claim ~~135~~⁵⁸.

~~147.~~ (New) A hybridoma that produces the antibody or fragment thereof of claim ~~135~~⁵⁸.

~~148.~~ (New) A method of detecting a DR4 protein in a biological sample comprising:

- a) contacting the biological sample with the antibody or fragment thereof of claim 135; and
- b) detecting the DR4 protein in the biological sample.

72
149. (New) A composition comprising the antibody or fragment thereof of claim
58 135, and a carrier.

150. (New) The antibody or fragment thereof of claim 135, which is an antagonist
of the polypeptide of SEQ ID NO:2.

151. (New) The antibody or fragment thereof of claim 135, which is an agonist
of the polypeptide of SEQ ID NO:2

73
152. (New) A method of producing the antibody or fragment thereof of claim 135
comprising:

- a) introducing an immunogenic epitope of a polypeptide consisting of amino acids 1-468 of SEQ ID NO:2 into an animal; and
- b) recovering said antibody or fragment thereof.

135
153. (New) An isolated antibody or fragment thereof which specifically binds a polypeptide consisting of amino acids 1 to 468 of SEQ ID NO:2, wherein said antibody or fragment thereof binds to an antigenic ^{epitope-bearing polypeptide fragment} epitope comprising at least 9 contiguous amino acids of SEQ ID NO:2.

136 *135*
154. (New) The isolated antibody or fragment thereof of claim 153, wherein said antibody or fragment thereof binds to an antigenic ^{epitope-bearing polypeptide fragment} epitope comprising at least 15-30 contiguous amino acids of SEQ ID NO:2.

137
155. (New) The antibody or fragment thereof of claim *153*, wherein said antibody
or fragment thereof specifically binds a polypeptide selected from the group consisting of:

- a) a polypeptide consisting of amino acids 24 to 468 of SEQ ID NO: 2;
- b) a polypeptide consisting of amino acids 24 to 238 of SEQ ID NO: 2;
- c) a polypeptide consisting of amino acids 132 to 221 of SEQ ID NO: 2;
- d) a polypeptide consisting of amino acids 35 to 92 of SEQ ID NO: 2;
- e) a polypeptide consisting of amino acids 114 to 160 of SEQ ID NO: 2;
- f) a polypeptide consisting of amino acids 169 to 240 of SEQ ID NO: 2;
- g) a polypeptide consisting of amino acids 239 to 264 of SEQ ID NO: 2;
- h) a polypeptide consisting of amino acids 265 to 468 of SEQ ID NO: 2;
- i) a polypeptide consisting of amino acids 267 to 298 of SEQ ID NO: 2;
- j) a polypeptide consisting of amino acids 330 to 364 of SEQ ID NO: 2;
- k) a polypeptide consisting of amino acids 391 to 404 of SEQ

ID NO: 2;

- l) a polypeptide consisting of amino acids 418 to 465 of SEQ

ID NO: 2;

- m) a polypeptide consisting of amino acids 379 to 422 of SEQ

ID NO: 2;

n) a polypeptide consisting of a portion of SEQ ID NO:2, wherein said portion comprises the amino acid sequence of at least 30 contiguous amino acids of SEQ ID NO:2; and

o) a polypeptide consisting of a portion of SEQ ID NO:2, wherein said portion comprises the amino acid sequence of at least 50 contiguous amino acids of SEQ ID NO:2.

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156. (New) An antibody or fragment thereof obtained from an animal that has been immunized with a polypeptide consisting of amino acids 1 to 468 of SEQ ID NO:2, wherein said antibody or fragment thereof binds to an antigenic epitope comprising at least 9 contiguous amino acids of SEQ ID NO:2.

139
157. (New) The antibody or fragment thereof of claim *156*, wherein said antibody or fragment thereof binds to an antigenic epitope comprising at least *15-30* contiguous amino acids of SEQ ID NO:2.

140
158. (New) The antibody or fragment thereof of claim *156*, wherein said polypeptide is selected from the group consisting of:

- a) a polypeptide consisting of amino acids 24 to 468 of SEQ ID NO: 2;
- b) a polypeptide consisting of amino acids 24 to 238 of SEQ ID NO: 2;
- c) a polypeptide consisting of amino acids 132 to 221 of SEQ ID NO: 2;
- d) a polypeptide consisting of amino acids 35 to 92 of SEQ ID NO: 2;
- e) a polypeptide consisting of amino acids 114 to 160 of SEQ ID NO: 2;
- f) a polypeptide consisting of amino acids 169 to 240 of SEQ ID NO: 2;
- g) a polypeptide consisting of amino acids 239 to 264 of SEQ ID NO: 2;
- h) a polypeptide consisting of amino acids 265 to 468 of SEQ ID NO: 2;
- i) a polypeptide consisting of amino acids 267 to 298 of SEQ ID NO: 2;
- j) a polypeptide consisting of amino acids 330 to 364 of SEQ ID NO: 2;
- k) a polypeptide consisting of amino acids 391 to 404 of SEQ ID NO: 2;
- l) a polypeptide consisting of amino acids 418 to 465 of SEQ ID NO: 2;

ID NO: 2;

- m) a polypeptide consisting of amino acids 379 to 422 of SEQ

ID NO: 2;

n) a polypeptide consisting of a portion of SEQ ID NO:2, wherein said portion comprises the amino acid sequence of at least 30 contiguous amino acids of SEQ ID NO:2; and

o) a polypeptide consisting of a portion of SEQ ID NO:2, wherein said portion comprises the amino acid sequence of at least 50 contiguous amino acids of SEQ ID NO:2.

74
159. (New) An isolated antibody or fragment thereof which specifically binds the extracellular domain of the polypeptide encoded by the cDNA contained in ATCC Deposit No. 97853.

75
160. (New) The antibody or fragment thereof of claim *159*, wherein said polypeptide is glycosylated.

77
161. (New) The antibody or fragment thereof of claim *159*, which is selected from the group consisting of:

- a) a chimeric antibody;
- b) a Fab fragment; and
- c) a F(ab')₂ fragment.

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78
162. (New) The antibody or fragment thereof of claim *159*, which is labeled.

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79
163. (New) The antibody or fragment thereof of claim *162*, wherein the label is
selected from the group consisting of:

- a) an enzyme;
- b) a fluorescent label; and
- c) a radioisotope.

80
164. (New) The antibody or fragment thereof of claim *159*, which specifically
binds to said extracellular domain in a Western blot.

74

81
165. (New) The antibody or fragment thereof of claim *159*, which specifically
binds to said extracellular domain in an ELISA.

82
166. (New) The antibody or fragment thereof of claim *159*, which specifically
binds to said extracellular domain in a competitive-binding assay.

83
167. (New) The antibody or fragment thereof of claim *159*, which specifically
binds to said extracellular domain in a radioimmunoassay.

84
168. (New) An isolated cell that produces the antibody or fragment thereof of
claim *159*.

169. (New) A hybridoma that produces the antibody or fragment thereof of claim 159.

74
159.

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170. (New) A method of detecting a DR4 protein in a biological sample comprising:

- a) contacting the biological sample with the antibody or fragment thereof of claim 159; and
- b) detecting the DR4 protein in the biological sample.

74
159.

87
171. (New) A composition comprising the antibody or fragment thereof of claim 159, and a carrier.

172. (New) The antibody or fragment thereof of claim 159, which is an antagonist of the polypeptide encoded by the cDNA contained in ATCC Deposit No. 97853.

173. (New) The isolated antibody fragment of claim 159, which is an agonist of the polypeptide encoded by the cDNA contained in ATCC Deposit No. 97853.

88
174.
174.

174. (New) A method of producing the isolated antibody or fragment thereof of claim 159 comprising:

- a) introducing an immunogenic epitope of the polypeptide encoded by the cDNA contained in ATCC Deposit No. 97853 into an animal; and

98

or fragment thereof

- b) recovering said antibody fragment:

89
175. (New) An isolated monoclonal antibody or fragment thereof which specifically binds the extracellular domain of the polypeptide encoded by the cDNA contained in ATCC Deposit No. 97853.

90
176. (New) The antibody or fragment thereof of claim 175, wherein said polypeptide is glycosylated.

91
177. (New) The antibody or fragment thereof of claim 175 which is selected from the group consisting of:

- a) a chimeric antibody;
- b) a Fab fragment; and
- c) a F(ab')₂ fragment.

92
178. (New) The antibody or fragment thereof of claim 175, which is labeled.

93
179. (New) The antibody or fragment thereof of claim 178, wherein the label is selected from the group consisting of:

- a) an enzyme;
- b) a fluorescent label; and
- c) a radioisotope.

180. (New) The antibody or fragment thereof of claim 175, which specifically binds to said polypeptide in a Western blot.

181. (New) The antibody or fragment thereof of claim 175, which specifically binds to said polypeptide in an ELISA.

182. (New) The antibody or fragment thereof of claim 175, which specifically binds to said polypeptide in a competitive-binding assay.

183. (New) The antibody or fragment thereof of claim 175, which specifically binds to said polypeptide in a radioimmunoassay.

184. (New) An isolated cell that produces the antibody or fragment thereof of claim 175.

185. (New) A hybridoma that produces the antibody or fragment thereof of claim 175.

Sub E⁹⁷

186. (New) A method of detecting a DR4 protein in a biological sample comprising:

- a) contacting the biological sample with the antibody or fragment thereof of claim 175; and
- b) detecting the DR4 protein in the biological sample.

100

101
187. (New) A composition comprising the antibody or fragment thereof of claim 175, and a carrier.

188. (New) The antibody or fragment thereof of claim 175, which is an antagonist of the polypeptide of encoded by the cDNA contained in ATCC Deposit No. 97853.

189. (New) The antibody or fragment thereof of claim 175, which is an agonist of the polypeptide of encoded by the cDNA contained in ATCC Deposit No. 97853.

102
190. (New) A method of producing the isolated antibody or fragment thereof of claim 175 comprising:

a) introducing an immunogenic epitope of the polypeptide encoded by the cDNA contained in ATCC Deposit No. 97853 into an animal;

and

b) recovering said antibody ^{or fragment thereof} fragment.

191. (New) An isolated antibody or fragment thereof obtained from an animal that has been immunized with the extracellular domain of the polypeptide encoded by the cDNA contained in ATCC Deposit No. 97853.

104
192. (New) The antibody or fragment thereof of claim 191, wherein said polypeptide is glycosylated.

105
193. (New) The antibody or fragment thereof of claim 191, which is polyclonal.

106
194. (New) The antibody or fragment thereof of claim 191, which is monoclonal.

107
195. (New) The antibody or fragment thereof of claim 191, which is selected from the group consisting of:

- a) a chimeric antibody;
- b) a Fab fragment; and
- c) a F(ab')₂ fragment.

108
196. (New) The antibody or fragment thereof of claim 191, which is labeled.

109
197. (New) The antibody or fragment thereof of claim 196, wherein the label is selected from the group consisting of:

- a) an enzyme;
- b) a fluorescent label; and
- c) a radioisotope.

110
198. (New) The antibody or fragment thereof of claim 191, which specifically binds to said polypeptide in a Western blot.

111
199. (New) The antibody or fragment thereof of claim 191, which specifically binds to said polypeptide in an ELISA.

112
200. (New) The antibody or fragment thereof of claim 191, which specifically binds to said polypeptide in a competitive-binding assay.

113
201. (New) The antibody or fragment thereof of claim 191, which specifically binds to said polypeptide in a radioimmunoassay.

114
202. (New) An isolated cell that produces the antibody or fragment thereof of claim 191.

115
203. (New) A hybridoma that produces the antibody or fragment thereof of claim 191.

204. (New) A method of detecting a DR4 protein in a biological sample comprising:
a) contacting the biological sample with the antibody or fragment thereof of claim 191; and
b) detecting the DR4 protein in the biological sample.

117
205. (New) A composition comprising the antibody or fragment thereof of claim 191, and a carrier.

206. (New) The antibody or fragment thereof of claim 191, which is an antagonist of the polypeptide encoded by the cDNA contained in ATCC Deposit No. 97853.

103

207. (New) The antibody or fragment thereof of claim 191, which is an agonist of the polypeptide encoded by the cDNA contained in ATCC Deposit No. 97853.

118
103
208. (New) A method of producing the isolated antibody or fragment thereof of claim 191 comprising:

a) introducing an immunogenic epitope of the polypeptide encoded by the cDNA contained in ATCC Deposit No. 97853 into an animal;

and

b) recovering said antibody ^{or fragment thereof} fragment.

141
209. (New) An isolated antibody or fragment thereof which specifically binds the full length polypeptide encoded by the cDNA contained in ATCC Deposit No. 97853, wherein said antibody or fragment thereof binds to an antigenic ^{epitope-bearing polypeptide fragment} epitope comprising at least 9 contiguous amino acids of said polypeptide.

142
210. (New) The antibody or fragment thereof of claim 209, wherein said antibody or fragment thereof binds to an antigenic ^{epitope-bearing polypeptide fragment} epitope comprising at least ¹⁵ ₁₅₋₃₀ contiguous amino acids of said polypeptide.

143
211. (New) The antibody or fragment thereof of claim 209, which specifically binds a polypeptide selected from the group consisting of:

a) a polypeptide consisting of the mature form of the polypeptide encoded by the cDNA contained in ATCC Deposit No. 97853;

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- b) a polypeptide consisting of the extracellular domain of the polypeptide encoded by the cDNA contained in ATCC Deposit No. 97853;
- c) a polypeptide comprising the amino acid sequence of at least 30 contiguous amino acids of the polypeptide encoded by the cDNA contained in ATCC Deposit No. 97853; and
- d) a polypeptide comprising the amino acid sequence of at least 50 contiguous amino acids of the polypeptide encoded by the cDNA contained in ATCC Deposit No. 97853.

144
212. (New) An isolated antibody or fragment thereof obtained from an animal that has been immunized with a polypeptide encoded by the cDNA contained in ATCC Deposit No. 97853, wherein said antibody or fragment thereof binds to an antigenic epitope-bearing polypeptide fragment comprising at least 9 contiguous amino acids of said polypeptide.

145
213. (New) The antibody or fragment thereof of claim *212*, wherein said antibody or fragment thereof binds to an antigenic epitope comprising at least *15-30* contiguous amino acids of said polypeptide.

146
214. (New) The isolated antibody or fragment thereof of claim *212*, wherein said antibody or fragment thereof specifically binds a polypeptide selected from the group consisting of:

- a) a polypeptide consisting of the mature form of the polypeptide encoded by the cDNA contained in ATCC Deposit No. 97853;

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- b) a polypeptide consisting of the extracellular domain of the polypeptide encoded by the cDNA contained in ATCC Deposit No. 97853;
- c) a polypeptide comprising the amino acid sequence of at least 30 contiguous amino acids of the polypeptide encoded by the cDNA contained in ATCC Deposit No. 97853; and
- d) a polypeptide comprising the amino acid sequence of at least 50 contiguous amino acids of the polypeptide encoded by the cDNA contained in ATCC Deposit No. 97853.

119
~~215.~~ (New) An isolated antibody or fragment thereof that specifically binds the mature polypeptide encoded by the cDNA contained in ATCC Deposit No. 97853, as it is naturally expressed on the surface of a cell.

216. (New) The antibody or fragment thereof of claim *215*, wherein said cell surface-expressed polypeptide is glycosylated.

217. (New) The antibody or fragment thereof of claim *215*, which is polyclonal.

218. (New) The antibody or fragment thereof of claim *215*, which is monoclonal.

219. (New) The antibody or fragment thereof of claim *215*, which is selected from the group consisting of :

- a) a chimeric antibody;

- b) a Fab fragment; and
- c) a F(ab')₂ fragment.

124
220. (New) The antibody or fragment thereof of claim *215*, which is labeled.

125
221. (New) The antibody or fragment thereof of claim *220*, wherein the label is selected from the group consisting of:

- a) an enzyme;
- b) a fluorescent label; and
- c) a radioisotope.

126
222. (New) The antibody or fragment thereof of claim *215*, which specifically binds to said polypeptide in a Western blot.

127
223. (New) The antibody or fragment thereof of claim *215*, which specifically binds to said polypeptide in an ELISA.

128
224. (New) The antibody or fragment thereof of claim *215*, which specifically binds to said polypeptide in a competitive-binding assay.

129
225. (New) The antibody or fragment thereof of claim *215*, wherein said antibody or fragment thereof specifically binds to said protein in a radioimmunoassay.

130
226. (New) An isolated cell that produces the antibody or fragment thereof of
claim 215.

131
227. (New) A hybridoma that produces the antibody or fragment thereof of claim
215.

Sub E 10
228. (New) A method of detecting a DR4 protein in a biological sample
comprising:
a) contacting the biological sample with the antibody or fragment
thereof of claim 215; and
b) detecting the DR4 protein in the biological sample.

133
229. (New) A composition comprising the antibody or fragment thereof of claim
215, and a carrier.

230. (New) The isolated antibody or fragment thereof of claim 215, wherein said
antibody fragment is an antagonist of the polypeptide encoded by the cDNA contained in
ATCC Deposit No. 97853.

231. (New) The isolated antibody or fragment thereof of claim 215, wherein said
antibody fragment is an agonist of the polypeptide encoded by the cDNA contained in
ATCC Deposit No. 97853.

134
232. (New) A method of producing the antibody or fragment thereof of claim *215*
comprising:

- a) introducing an immunogenic epitope of the polypeptide encoded by the cDNA contained in ATCC Deposit No. 97853 into an animal; and
- b) recovering said antibody or fragment thereof.

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233. (New) The antibody or fragment thereof of claim *84*, which specifically binds a polypeptide selected from the group consisting of:

- (a) a polypeptide consisting of amino acids 132 to 221 of SEQ ID NO:2;
 - (b) a polypeptide consisting of amino acids 35 to 92 of SEQ ID NO:2;
- and
- (c) a polypeptide consisting of amino acids 114 to 160 of SEQ ID NO:2.

- Sub D1*
234. (New) The antibody or fragment thereof of claim 233, that specifically binds protein (a).
235. (New) The antibody or fragment thereof of claim 233, that specifically binds protein (b).
236. (New) The antibody or fragment thereof of claim 233, that specifically binds protein (c).

D
Claim
237. (New) The antibody or fragment thereof of claim 234, that specifically binds protein (b).

34
238. (New) The antibody or fragment thereof of claim 101, which specifically binds a polypeptide selected from the group consisting of:

- (a) a polypeptide consisting of amino acids 132 to 221 of SEQ ID NO:2;
- (b) a polypeptide consisting of amino acids 35 to 92 of SEQ ID NO:2;
- and
- (c) a polypeptide consisting of amino acids 114 to 160 of SEQ ID NO:2.

Group 2
239. (New) The antibody or fragment thereof of claim 238, that specifically binds protein (a).

240. (New) The antibody or fragment thereof of claim 238, that specifically binds protein (b).

241. (New) The antibody or fragment thereof of claim 238, that specifically binds protein (c).

242. (New) The antibody or fragment thereof of claim 239, that specifically binds protein (b).

54
243. (New) The antibody or fragment thereof of claim 117, which specifically binds 38

binds a polypeptide selected from the group consisting of:

- (a) a polypeptide consisting of amino acids 132 to 221 of SEQ ID NO:2;
- (b) a polypeptide consisting of amino acids 35 to 92 of SEQ ID NO:2;
- and
- (c) a polypeptide consisting of amino acids 114 to 160 of SEQ ID NO:2.

244. (New) The antibody or fragment thereof of claim 243, that specifically binds protein (a).

245. (New) The antibody or fragment thereof of claim 243, that specifically binds protein (b).

246. (New) The antibody or fragment thereof of claim 243, that specifically binds protein (c).

247. (New) The antibody or fragment thereof of claim 244, that specifically binds protein (b).

248. (New) The antibody or fragment thereof of claim 159, which is polyclonal.